APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/681,953	06/29/2001	Nelson Raymond Corby JR.	RD-27700	1038

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EXAMINER
PAIK, STEVE S

ART UNIT	PAPER NUMBER
2876	

DATE MAILED: 08/22/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 07-01)

	Application No.		**Applicant(s)**
Office Action Summary	09/681,953		CORBY, NELSON RAYMOND
	Examiner		**Art Unit**
	Steven S. Paik		2876

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _29 June 2001_ .

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-20_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-5,7-10,12 and 15-20_ is/are rejected.

7)☒ Claim(s) _6,11,13 and 14_ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _29 June 2001_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____ .

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _2_ .

4)☐ Interview Summary (PTO-413) Paper No(s). _____ .
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: _____ .

DETAILED ACTION

Claim Objections

1.   Claim 17 is objected to because of the following informalities: the word, "formingfirst"

appears to be -- forming first --. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in-
> (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or
> (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

3.   Claims 1-5, 7-10, 12 and 15-20 are rejected under 35 U.S.C. 102(e) as being anticipated

by Behrens (USP 6,434,340).

Regarding claim 1, Behrens discloses a data representation comprising:

a first multiplicity of machine-detectable marks (col. 3, ll. 33-36) arranged in accordance

with a two-dimensional redundant bit pattern (col. 4, ll. 62-65), said first multiplicity of marks

having an appearance to human vision resembling a first character (col. 2, ll. 17-22, col. 3, ll. 29-

31 and see Fig. 2), and said two-dimensional redundant bit pattern comprising a repeating pattern

of first and second bit strings (binary 1's and 0's) forming respective first and second codes

identifying the first character (1) and a second character (5) respectively, the second character

being different than the first character (col. 5, ll. 11-15).

Regarding claim 2, Behrens discloses the data representation as recited in rejected claim 1 stated above, further comprising a second multiplicity of machine-detectable marks (5) arranged in accordance with the two dimensional redundant bit pattern (col. 4, ll. 62-65), the second multiplicity of marks having an appearance to human vision resembling the second character (5).

Regarding claim 3, Behrens discloses the data representation as recited in rejected claim 2 stated above, further comprising machine detectable first and second spatial registration indicators (42 and 44 in Fig. 2) placed such that said first and second multiplicities of machine-detectable marks will be spatially registered when the first and second spatial registration indicators are spatially registered (col. 3, ll. 61-67 and col. 4, ll. 1-9).

Regarding claim 4, Behrens discloses the data representation as recited in rejected claim 1 stated above, where the machine-detectable marks comprises dots (col. 4, ll. 65-67) superimposed on an optically contrasting background (such as film 18).

Regarding claim 5, Behrens discloses the data representation as recited in rejected claim 1 stated above, where the first and second codes are ASCII codes (col. 5, ll. 11-15).

Regarding claim 7, Behrens discloses a data representation comprising:

a first and second human readable characters (1 and 5) respectively formed in first and second areas (see Fig. 2) occupied by first and second arrays of machine-detectable marks (col. 3, ll. 33-36) arranged in accordance with a two-dimensional redundant bit pattern (col. 4, ll. 62-65), said arrays of machine detectable marks in the first and second areas respectively having first and second shapes indicative of the first and second human-readable characters (col. 2, ll. 17-22, col. 3, ll. 29-31 and see Fig. 2) respectively, and said two-dimensional redundant bit

pattern comprising a repeating pattern of first and second bit strings (binary 1's and 0's) forming

respective first and second codes identifying the first (1) and a second (5) human-readable

characters respectively, the second human-readable character being different than the first

character (col. 5, ll. 11-15).

Regarding claim 8, Behrens discloses the data representation as recited in rejected claim

7 stated above, further comprising machine detectable first and second spatial registration

indicators (42 and 44 in Fig. 2) formed in said first and second areas respectively and placed

such that first and second arrays of machine detectable marks will be spatially registered when

the first and second spatial registration indicators are spatially registered (col. 3, ll. 61-67 and

col. 4, ll. 1-9).

Regarding claim 9, Behrens discloses the data representation as recited in rejected claim

7 stated above, where the machine-detectable marks comprises dots (col. 4, ll. 65-67)

superimposed on an optically contrasting background (film 18).

Regarding claim 10, Behrens discloses the data representation as recited in rejected claim

7 stated above, where the first and second codes are ASCII codes (col. 5, ll. 11-15).

Regarding claim 12, Behrens discloses a system comprising:

a part comprising:

first and second multiplicities of machine-detectable marks (col. 3, ll. 33-36)

arranged in accordance with a two-dimensional redundant bit pattern (col. 4, ll. 62-65),

said first and second multiplicities of marks having an appearance to human vision

resembling a first and second characters respectively (col. 2, ll. 17-22, col. 3, ll. 29-31

and see Fig. 2), and said two-dimensional redundant bit pattern comprising a repeating

pattern of first and second bit strings (binary 1's and 0's) forming respective first and

second codes identifying the first (1) and second characters (5) respectively, the second

character being different than the first character (col. 5, ll. 11-15);

an imager (scanner which inherently comprises, among other things,

photodetector) for imaging an area of the part occupied by the marks to produce electrical

signals having characteristics which allow discrimination between electrical signals

derived from imaging of marks and electrical signals derived from imaging of areas

outside of marks (by ADC 42); and

a computer (12 in Fig. 1) programmed to derive the first and second codes from

the electrical signals outputted by the imager.

Regarding claim 15, Behrens discloses the system as recited in rejected claim 12 stated

above, where the machine-detectable marks comprises dots (col. 4, ll. 65-67) superimposed on

an optically contrasting background (film 18).

Regarding claim 16, Behrens discloses the system as recited in rejected claim 12 stated

above, where the first and second codes are ASCII codes (col. 5, ll. 11-15).

Regarding claim 17, Behrens discloses a method of presenting data comprising steps of:

forming first and second human-readable characters (1 and 5) respectively in first and

second areas (see Fig. 2) on the part by applying first and second arrays of machine-detectable

marks (col. 3, ll. 33-36) arranged in two-dimensional redundant bit pattern (col. 4, ll. 62-65), said

first and second arrays of machine-detectable marks respectively having first and second shapes

indicative of the first and second human-readable characters (col. 2, ll. 17-22, col. 3, ll. 29-31

and see Fig. 2) respectively, and said two-dimensional redundant bit pattern comprising a

repeating pattern of first and second bit strings (binary 1's and 0's) forming respective first and second codes identifying the first (1) and a second (5) human-readable characters respectively, the second human-readable character being different than the first character (col. 5, ll. 11-15).

Regarding claim 18, Behrens discloses a method of identifying parts comprising the following steps:

marking a part with first and second character-shaped (1 and 5) arrays of marks;

acquiring an image of the part marking (via scanner);

digitizing (via ADC 42) the acquired image to form first and second bit maps comprising bits corresponding to the first and second character-shaped array of marks (col. 3, ll. 33-36);

spatially registering the first and second bit maps (col. 3, ll. 61-63);

forming a union of spatially registered maps; and

decoding the composite bit map resulting from the union of the spatially registered bit maps to identify the part (col. 4, ll. 33-39).

Regarding claim 19, Behrens discloses a system for identifying parts comprising:

a part marked with first and second character-shaped (1 and 5) arrays of marks;

an imager (scanner) acquiring an image of the part marking; and

a computer programmed (12 in Fig. 1) programmed to perform the following steps:

digitizing (via ADC 42) the acquired image to form first and second bit maps comprising bits corresponding to the first and second character-shaped array of marks (col. 3, ll. 33-36);

spatially registering the first and second bit maps (col. 3, ll. 61-63);

forming a union of spatially registered maps; and

decoding the composite bit map resulting from the union of the spatially registered bit maps to identify the part (col. 4, ll. 33-39).

Regarding claim 20, Behrens discloses the system as recited in rejected claim 19 stated above, where the machine-detectable marks comprises dots (col. 4, ll. 65-67) superimposed on an optically contrasting surface of the part (photographic film 18).

Allowable Subject Matter

4.   Claims 6, 11, 13 and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5.   The following is a statement of reasons for the indication of allowable subject matter: none of the prior art of record teaches or fairly suggests the claimed part marking comprising, among other things, a third multiplicity of machine-detectable marks arranged in two dimensional redundant bit pattern and the pattern further comprising a third bit string forming a third code identifying said third character.

Conclusion

6.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Cymbalski et al. (USP 5,324,923) disclose a dynamically variable machine-readable binary code and method for reading.

Roxby et al. (USP 5,585,616) disclose a method and an apparatus for enhancing the optical image of information-containing symbols read from reflective surfaces.
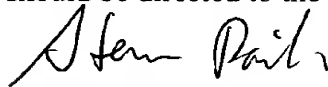
Thomas (USP 4,263,504) discloses a machine-readable matrix-type code.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven S. Paik whose telephone number is 703-308-6190. The examiner can normally be reached on Mon - Fri (7:00am-3:30pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached on 703-305-3503. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0530.

Steven S. Paik
Examiner
Art Unit 2876

ssp
August 13, 2002

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